



14261 - Acquisition ESOH: An OSD Perspective

**2012 NDIA Environment, Energy Security & Sustainability (E2S2)
Symposium and Exhibition**

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(Installations & Environment)**

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Outline

- **DUSD(I&E) Goals for Environment, Safety, and Occupational Health (ESOH) in Acquisition**
- **Acquisition ESOH Today:**
 - **Documentation streamlining impacts & the Defense Acquisition Guide (DAG) re-write**
 - **Strengths & Gaps**
 - **Success Stories**
 - **Hexavalent Chromium Minimization & Workforce Education**
- **Moving Forward: Objectives toward impacting the future**
 - **Providing Necessary Policy & Guidance**
 - **Developing or Improving Analytical Tools & Products**
 - **Improving Program Oversight**
 - **Enhancing the Effectiveness of the Workforce**



Goals for ESOH in Acquisition

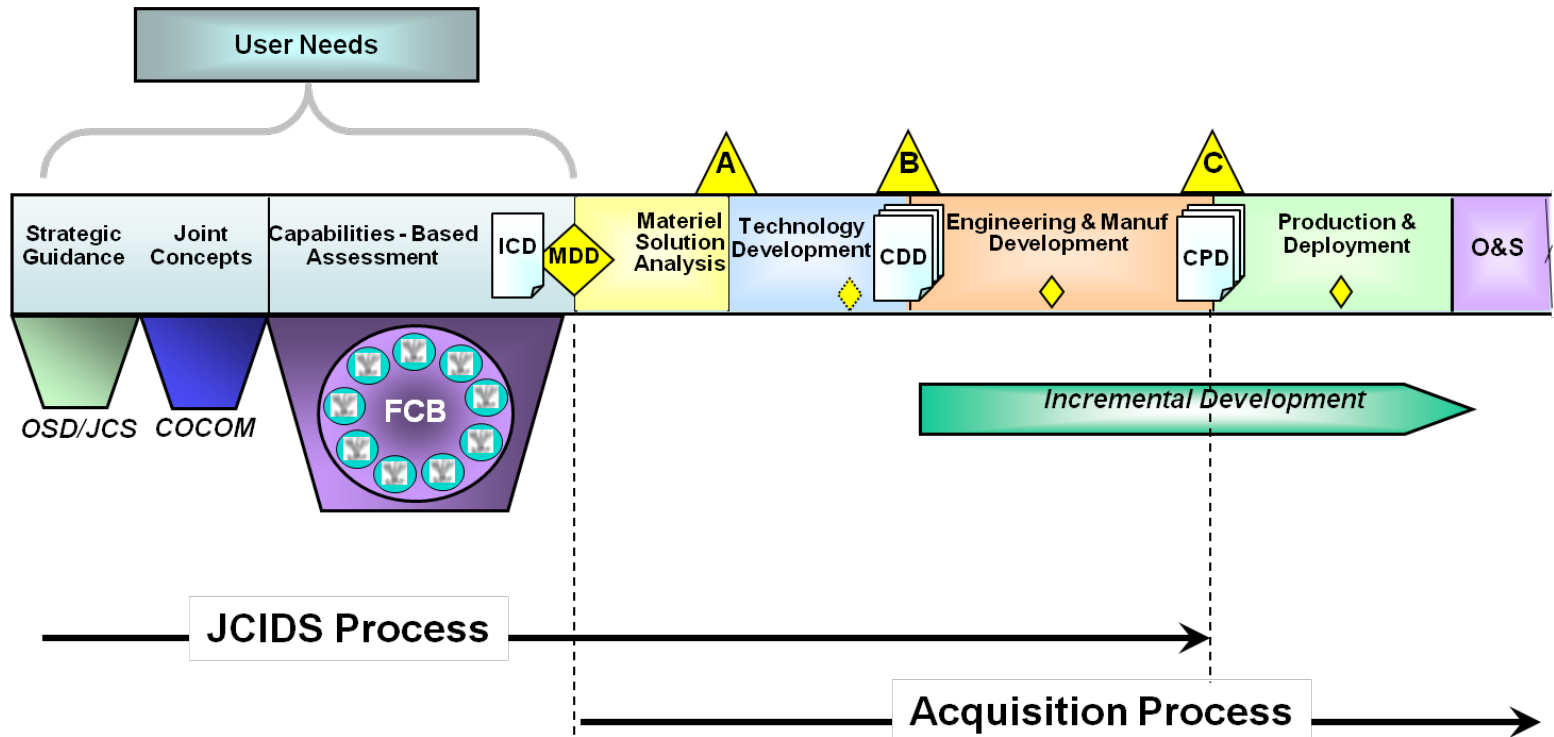
■ Support the warfighter and DoD's mission

- Prevent loss of life or serious injury to personnel
- Avoid damage to facilities or equipment
- Prevent harm to the environment and the surrounding community
- Avoid system failures that negatively impact mission capability or mission operability





Defense Acquisition Management System



ESOH Considerations Need to Span Life Cycle



Acquisition ESOH Today: Document Streamlining



Acquisition Documentation Streamlining (ADS) Task Force (TF)

- USD(AT&L) issued 14 SEPT 2010 Better Buying Power Memo
 - Identifies “Principal Actions to Improve Efficiency...in five major areas”
 - “Reducing non-productive processes and bureaucracy”
 - “Unnecessary and low-value added processes and document requirements are a significant drag on acquisition productivity and must be aggressively identified and eliminated.”
- USD(AT&L) directed overall effort **in late 2010 - early 2011**
 - Document owners manage efforts for their documents based on ADS TF recommendations
- Goal:
 - Eliminate non-value added content in acquisition documentation and increase value to organizations / decision makers.
 - Acquisition documents will be reviewed, streamlined or, where feasible, eliminated
 - Required reports will also be reviewed
 - The value and utility of all reports will be re-assessed



ADS TF Outcomes

■ AT&L issued “Expectations Memo” on 20 April 2011

■ Programmatic ESOH Evaluation (PESHE):

- Attached to Systems Engineering Plan (SEP) as a “hotlink”
- Designated Component Acquisition Executive (CAE) as the approval authority for the document

■ Acquisition Strategy:

- Removed PESHE Summary and the National Environmental Policy Act (NEPA) / Executive Order 12114 Compliance Schedule

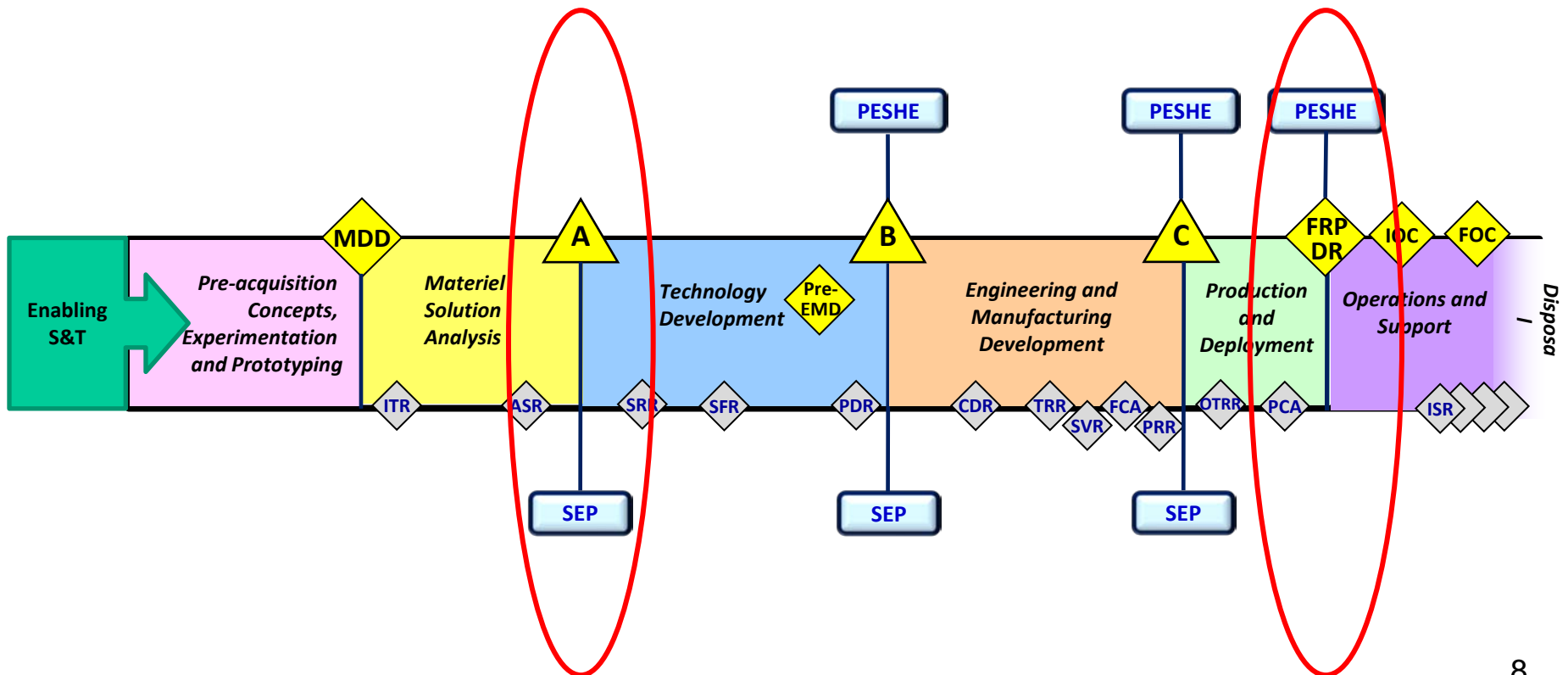
■ Long Term:

- Incorporate updates into DoDI 5000.02, Operation of the Defense Acquisition System, and the Defense Acquisition Guidebook



ADS TF Outcomes, Cont.

- Currently, Gaps in Acquisition Policy and Guidance
 - Disconnect between when SEP and PESHE are required

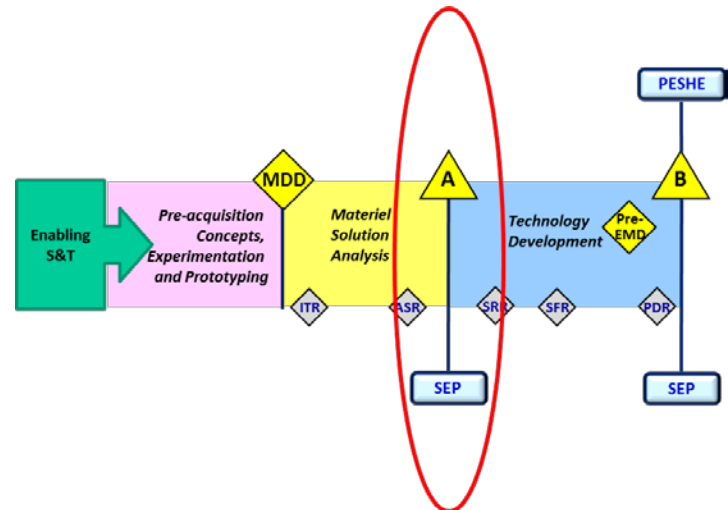




DUSD(I&E) Recommendation to AT&L: Require a PESHE at MS-A

■ Rationale:

- Pre MS-B Preliminary Design Review (PDR) and Prototyping require ESOH involvement
 - ESOH risk management status reporting required at PDR
 - NEPA compliance required for Development and Test activities
- With Technology Development (TD) activities moved to left, PESHE out of alignment with acquisition framework
- Supports current initiatives for earlier Systems Engineering



- Proposal: Publish this as policy in next update to DoDI 5000.02



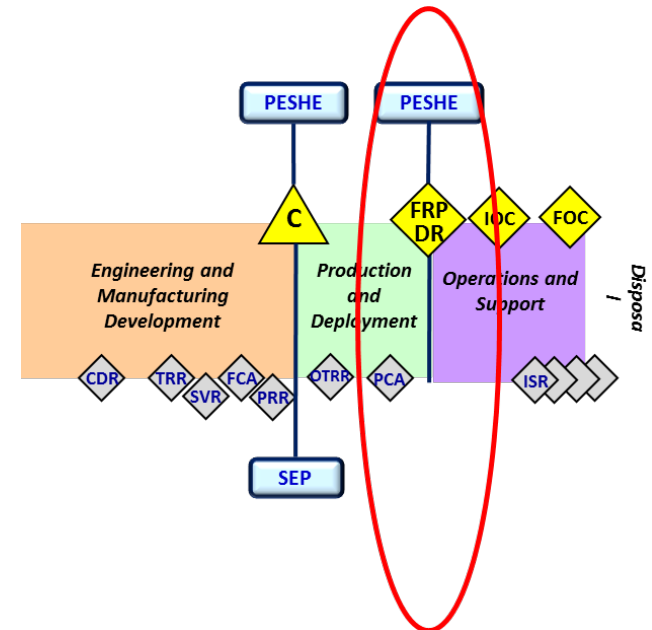
DUSD(I&E) Recommendation to AT&L: Maintain a PESHE at FRP

■ Rational:

■ Need PESHE at Full Rate Production (FRP)

Decision to:

- Capture ESOH data and requirements going into Operations and Support (O&S) phase
- Capture design changes and lessons learned from manufacturing, operational test, etc.
- Provide historic record of ESOH activities and decisions as well as plans for NEPA compliance and other ESOH activities going into O&S



■ Proposal: Maintain this current policy in next update to DoDI 5000.02



Acquisition ESOH Today: Success Stories



Workforce Education

- **CLR 030, ESOH in Joint Capabilities Integration & Development System (JCIDS)**
 - Course supports ESOH Subject Matter Expert (SME) understanding of and participation in the JCIDS process
 - Three key components to course
 - Overview of the JCIDS process - focused on what ESOH SMEs will need
 - Developing and prioritizing appropriate ESOH capability statements
 - Effective participation in the JCIDS document development process
- **CLE 009, ESOH in Systems Engineering**
 - Overhauled entire course
 - Renamed from “Systems Safety in Systems Engineering”
 - Linked training to CLR 030, ESOH in JCIDS Course



MIL-STD-882E, Standard Practice Systems Safety

- **MIL-STD-882E published on May 11, 2012 following five year effort**
 - **Changes include:**
 - Clarifying terminology
 - Increasing dollar values for losses in severity descriptions
 - Adding “eliminated” to level for probability classifications
 - Adding software system safety techniques and practices
 - Re-introducing tasks and adding four new tasks
 - Hazardous Materials Management Plan, Functional Hazard Analysis, Systems-of-Systems Hazard Analysis , and Environmental Hazard Analysis
 - **Example: Task 108 – Hazardous Materials Management Plan**
 - Worked with Aerospace Industries Association (AIA) to align National Aerospace Standard (NAS) 411 and MIL-STD 882E Task 108
 - Categorizes hazardous materials as Prohibited, Restricted, or Tracked
 - Updated NAS 411 to provide list of hazardous materials in these three categories



Factoring Sustainability into Acquisition Programs

- **Developing “Sustainability in Acquisition” Methodology based on three Levels of Life Cycle Assessment, which could be placed on contracts**
- **Communicating with stakeholders to identify improvements and gain support**
- **Programs would identify sustainability factors to be considered and the appropriate decision point**
 - **Use physical, chemical, and toxicity data to make smart choices**
 - **Possible weighting or scoring system for alternatives**
 - **Provide examples of the types of life cycle costs that need to be considered**
- **Could be used to support DoD Cost Analysis Improvement Group (CAIG) Cost Estimating Guide**



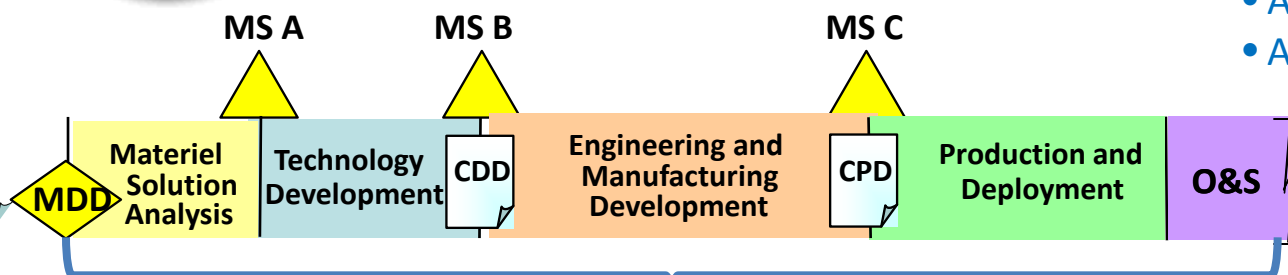
Program Support Reviews (PSR)

- Funding obtained so DUSD(I&E) can continue to provide ESOH subject matter experts
- However, due to DoD budget constraints, there has been a reduction in number of PRS
- B-61 Tail Sub-Assembly (completed)
- TAO(X) – Fleet Replenishment Oil Tanker (began April 2012)

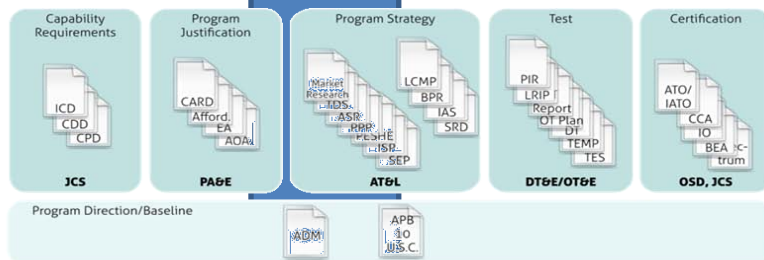


Program Oversight: Acquisition Information Repository (AIR) Concept of Operations

- AIR General User (AGU) – R
- AIR Local User (ALU) – R/W/Delete



Current
Approved
Milestone
Information



Meta-tagged
Documents;
Extensible to Data

- A step toward “write once, use many”, structured data, MS decision readiness, horizontal analysis, root-cause analysis, etc.



Wide
access
Securely
selected



- OSD Staff
- AT&L
 - CAPE
 - Comptroller
 - OT&E, etc
- Joint Staff
- Hdqtrs
 - PEOs
 - PMs/PMOs

Authoritative
source for AV,
etc.



Moving Forward: Future Objectives



Providing Necessary Policy & Guidance

- **Participate in DoDI 5000.02 Update**
- **Support re-write of Defense Acquisition Guidebook (DAG)**
- **Develop a PESHE-writing Guide**
- **Work to better integrate ESOH considerations into the Systems Engineering Plan (SEP)**



Developing or Improving Analytic Tools and Products

- **Develop criteria for evaluating the sustainability of new systems regarding human health and the environment**
 - **Continue development of “Sustainability in Acquisition” Methodology to evaluate full life-cycle costs and human health and environmental implications of alternatives**
 - **Pilot draft methodology for Life Cycle Assessment with Boeing and Sikorsky (Involves Yale University experts and students)**
- **Develop ESOH Handbook for JCIDS documents**
 - **Develop example capability statements (ICD, CDD, and CPD) for the various DoD systems**
 - **Will supplement CLR 030, ESOH in JCIDS, continuous learning module**
 - **Joint effort by HSI and ESOH Communities**



Improving Program Oversight

- **Increase ESOH Subject Matter Expert Participation in Program Support Reviews (PSRs)**
 - **Dependent on the DASD(SE) PSR schedule**
- **Develop improved guidance for the Defense Acquisition Program Support (DAPS) methodology to improve ESOH coverage in PSRs**



Enhancing Effectiveness of the Workforce

- Improve training of ESOH staff on the Acquisition process; and of the Acquisition corps on ESOH requirements by
 - Developing training on new PESHE guide (long term)
 - Updating ESOH Community on the Acquisition Community Connection (ACC) portal (DAG Chapter 4 re-write also a driver)



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BACKUP SLIDES



Workforce Education

- **CLR 030, ESOH in Joint Capabilities Integration & Development System (JCIDS)**
- **Developed online training to support ESOH Subject Matter Expert (SME) participation**
- **Three key components to course**
 - **Overview of the JCIDS process - focused on what ESOH SMEs will need**
 - **Developing and prioritizing appropriate ESOH capability statements**
 - **Effective participation in the JCIDS document development process**
- **Course Launched on Defense Acquisition University (DAU) Learning Management System (LMS) in March 2011**
- **JCIDS ESOH Policy Memo under development**
 - **ESOH Senior Leadership endorses all JCIDS documents**
 - **Acknowledges ESOH communities have opportunity to provide inputs**
 - **Raise awareness with leadership for support planning purposes**
 - **DoD Components establish internal processes**



Workforce Education, Cont.

■ CLE 009, ESOH in Systems Engineering

- Overhauled entire course
- Renamed from “Systems Safety in Systems Engineering”
- Linked training to CLR 030, ESOH in JCIDS Course
- Updated terminology
- Made current with new Acquisition Integrated Framework Diagram and SE V-charts
- Incorporated lesson on risk management and risk reporting process
- Launched on DAU LMS in November 2011



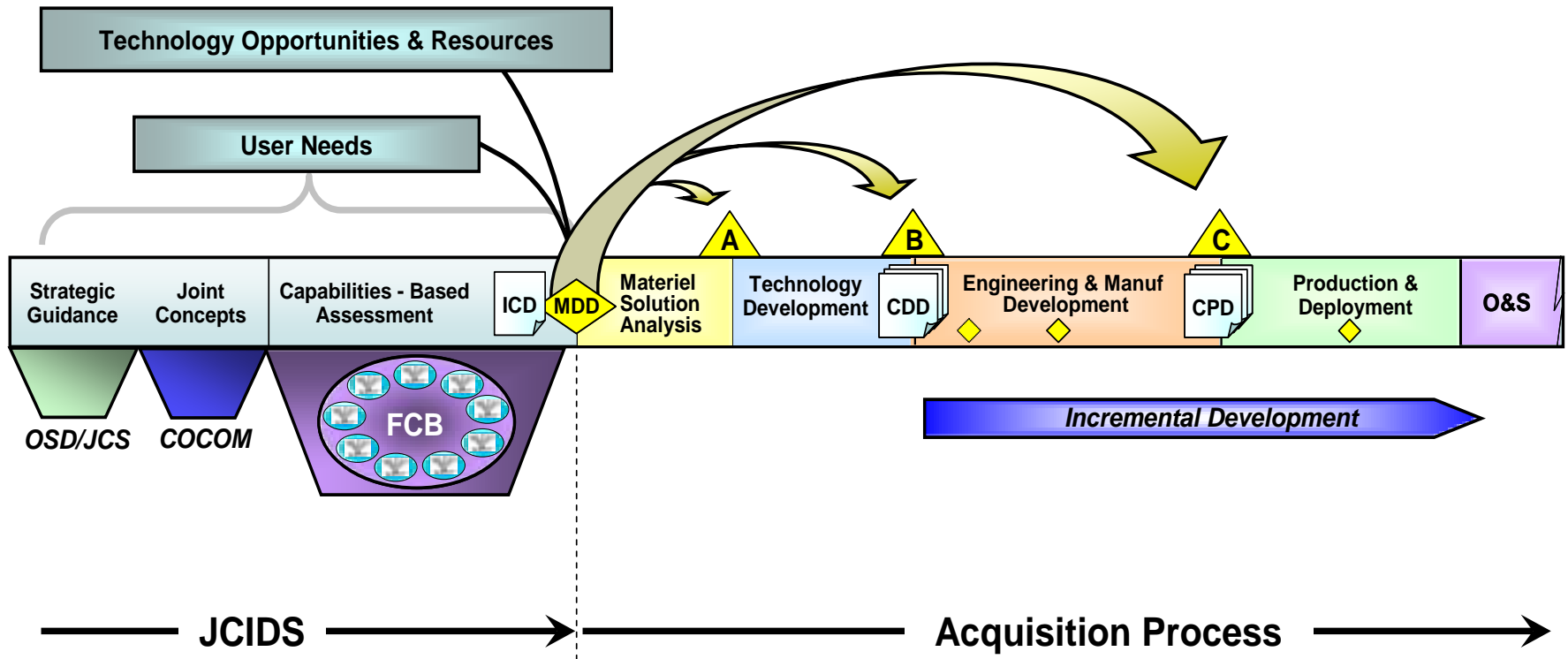
Acquisition Policy & Guidance

- **DoD Directive (DoDD) 5000.01, The Defense Acquisition System (May 12, 2003)**
- **DoD Instruction (DoDI) 5000.02, Operation of the Defense Acquisition System (December 08, 2008)**
- **Defense Acquisition Guidebook, <https://dag.dau.mil/>**
- **Acquisition Community Connection, ESOH Special Interest Area, <https://acc.dau.mil/esoh>**





Defense Acquisition Management System



ESOH Considerations Need to Span Life Cycle



Graphic Depicts Gap Between PDR and MS B

- Require PESHE at Milestone A (MS-A)

